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Approved for use through 10/31/2002 OMB 0651-0032  
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Attorney Docket No	46395/247166
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<i>First Inventor</i>	DHANOA, Daljit S
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Title	Quaternary Amino Acids on Gold Supports
Author	M. J. J. van den Hul, J. A. M. Smit, and J. H. W. Lammerink
Journal	Journal of Chromatography A, 1999, 857, 1-10
DOI	10.1016/S0021-9686(99)00001-1
Keywords	Quaternary ammonium salts, gold, chromatography, ion exchange
Abstract	Quaternary ammonium salts were immobilized on gold particles by electrostatic interaction. The immobilized salts were used as ion exchange chromatography stationary phase. The stationary phase was characterized by elemental analysis, infrared spectroscopy, and X-ray photoelectron spectroscopy. The chromatographic behavior of a range of organic cations was studied. The results show that the stationary phase is suitable for the separation of organic cations. The separation of a mixture of organic cations was achieved on a column packed with the stationary phase. The stationary phase was stable for at least 100 cycles of use.

Express Mail Label No. EV 032198738 US

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO:

Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

1. ☐ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☐ Specification [Total Pages]   
(preferred arrangement set forth below)
- Descriptive title of the Invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings ( if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets]
5. Oath or Declaration [Total Pages]
- a. ☐ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63 (d))  
(for a continuation/divisional with Box 18 completed)
- i. ☐ DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s)  
named in the prior application, see 37 CFR  
1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (*Appendix*)
8. Nucleotide and/or Amino Acid Sequence Submission (*if applicable, all necessary*)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ paper
- c. ☐ Statements verifying identity of above copies

### ACCOMPANYING APPLICATIONS PARTS

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 C.F.R. §3.73(b) Statement ☐ Power of Attorney  
(when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122  
(b)(2)(B)(i). Applicant must attach form PTO/SB/35  
or its equivalent.
17. ☐ Other:

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP)

of prior application No: \_\_\_\_\_ / \_\_\_\_\_

Prior application information: Examiner

Group / Art Unit: \_\_\_\_\_

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.


## 17. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label

or ☒ Correspondence address below

(Insert Customer No. or Attach bar code label here)

Name	Charles W. Calkins					
	Kilpatrick Stockton LLP					
Address	1001 West Fourth Street					
City	Winston-Salem		State	NC	Zip Code	27101
Country	USA	Telephone	(336) 607-7300		Fax	336-607-7500

Name (Print/Type)	Charles W. Calkins	Registration No. (Attorney/Agent)	31,814
Signature		Date	12/6/01

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**FEE TRANSMITTAL  
for FY 2002**

Patent fees are subject to annual revision.

**TOTAL AMOUNT OF PAYMENT** (\$) 793

Continue if Known

Application Number	To Be Assigned
Filing Date	Herewith
First Named Inventor	DHANOA, Daljit S.
Examiner Name	Unassigned
Group / Art Unit	Unassigned
Attorney Docket No	46395/247166

**METHOD OF PAYMENT (check one)**

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:
- Deposit Account Number: 16-1435
- Deposit Account Name: Kilpatrick Stockton LLP
- ☒ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17
- ☒ Applicant claims small entity status. See 37 CFR 1.27
2. ☒ Payment Enclosed:
- ☒ Check ☐ Credit card ☐ Money Order ☐ Other

**FEE CALCULATION**

1. BASIC FILING FEE					
Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid
101	740	201	370	Utility filing fee	370
106	330	206	165	Design filing fee	
107	510	207	255	Plant filing fee	
108	740	208	370	Reissue filing fee	
114	160	214	80	Provisional filing fee	
<b>SUBTOTAL (1)</b>					<b>(\$ 370)</b>

**2. EXTRA CLAIM FEES**

Total Claims					
67	-20 **	=	47	X	9
				=	423
Independent Claims					
1	-3 **	=	0	X	
				=	0
Multiple Dependent					
				X	
				=	0
Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	
103	18	203	9	Claims in excess of 20	
102	84	202	42	Independent claims in excess of 3	
104	280	204	140	Multiple dependent claim, if not paid	
109	84	209	42	** Reissue independent claims over original patent	
110	18	210	9	** Reissue claims in excess of 20 and over original patent	
<b>SUBTOTAL (2)</b>					<b>(\$ 423)</b>

\*\*or number previously paid, if greater. For Reissues, see above

**FEE CALCULATION (continued)**

3. ADDITIONAL FEES					
Fee Code	Large Entity Fee (\$)	Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	
139	130	239	130	Non-English specification	
147	2,520	247	2,520	For filing a request for reexamination	
112	920*	212	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	213	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	920	217	460	Extension for reply within third month	
118	1,440	218	720	Extension for reply within fourth month	
128	1,960	228	980	Extension for reply within fifth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	
121	280	221	140	Request for oral hearing	
138	1,510	238	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,280	241	640	Petition to revive - unintentional	
142	1,280	242	640	Utility issue fee (or reissue)	
143	460	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	222	130	Petitions to the Commissioner	
123	50	223	50	Processing fee under 37 CFR 1.17 (q)	
126	180	226	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	740	246	370	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	
179	740	279	370	Request for Continued Examination (RCE)	
169	900	269	900	Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)**

(\$ 0)

**SUBMITTED BY**

Complete (if applicable)

Name (Print/Type)	Charles W. Calkins	Registration No. Attorney/Agent)	31,814	Telephone	(336) 607-7300
Signature				Date	December 6, 2001

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Daljit S. DHANOA  
Serial No. : To be Assigned  
Filing Date : Herewith  
For : QUATERNARY AMINO ACIDS  
ON SOLID SUPPORTS

US Patent and Trademark Office  
Box: PATENT APPLICATION  
P.O. Box 2327  
Arlington, VA 22202

**TRANSMITTAL OF APPLICATION UNDER 37 CFR 1.41(c)**

Sir:

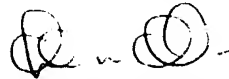
The undersigned attorney hereby makes application for U.S. Letters Patent on behalf of the following Applicant, whose address and citizenship is as follows:

Inventor	Address	Citizenship
Daljit S. Dhanoa	4506 Crown Lake Circle Apt. 2E Jamestown, NC 27282	USA

Please address all correspondence and telephone calls in connection with this application to:

Charles W. Calkins, Esq.  
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1001 W. Fourth Street  
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(336) 607.7500 (facsimile)

Respectfully submitted,



Charles W. Calkins, Reg. No. 31,814

Date: 12/4/01  
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1001 West Fourth Street  
Winston-Salem, NC 27101  
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EXPRESS MAIL CERTIFICATE

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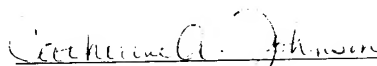
Date of Deposit: December 6, 2001

Type of Document(s): Utility Patent Application Transmittal;  
Specification (84 Pages, including 1 Page  
Abstract;  
8 Sheets of Formal Drawings;  
Transmittal of Application Under  
37 CFR 1.41(c);  
Fee Transmittal for FY 2001 (*In Duplicate*);  
Check for \$793.00; and  
Return Postcard

Serial No.: Unassigned

Date Filed: Herewith

I hereby certify that the documents identified above are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. §1.10 on the date indicated above and are addressed to the US Patent and Trademark Office, BOX PATENT APPLICATION, P.O. Box 2327, Arlington, VA 22202.

  
Catherine A. Johnson